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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/988,370 | 11/19/2001 | Seishi Ikami | Q67217 | 8352 |
| 7590 | 04/02/2004 | | EXAMINER | |
| SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3202 | | | MORAN, TIMOTHY J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2878 | |
| DATE MAILED: 04/02/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/988,370 | IKAMI, SEISHI | |
| | Examiner | Art Unit | |
| | Timothy J. Moran | 2878 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 February 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12,17-21 and 23 is/are rejected.
- 7) Claim(s) 13-16,22,24 and 25 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/24/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9-12, 17, 19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Zarling, U. S. Patent No. 5,891,656. Regarding claims 1 and 7, Zarling describes an image producing data method comprising irradiating an image carrier (fig. 28) with a stimulating ray (col. 5, lines 24-41), stopping the irradiation and detecting residual fluorescence (col. 33, lines 6-14) using a two dimensional sensor (CCD, col. 32, line 63-col. 33, line 4).

Regarding claim 2, the method of Zarling is understood to be repeatable.

Regarding claims 3 and 4, Zarling describes the use of a shutter and a chopper (col. 33, lines 14-20).

Regarding claim 5, Zarling teaches the use of a filter for cutting light having a wavelength of the stimulating ray (col. 6, lines 3-5).

Regarding claim 9, Zarling teaches the use of a micro-titer plate (col. 39, lines 26-27).

Regarding claims 10 and 12, Zarling describes an apparatus comprising a stimulating ray source (col. 31, line 66-col. 32, line 1), an image carrier including two-dimensionally distributed specimen spots (fig. 28), a two-dimensional sensor (CCD, col.

32, line 63-col. 33, line 4), and means for detecting residual fluorescence emission (col. 33, lines 6-14).

Regarding claim 11, the steps of Zarling are understood to be repeatable.

Regarding claim 17, Zarling teaches the use of a filter for cutting light having a wavelength of the stimulating ray (col. 6, lines 3-5).

Regarding claim 19, Zarling teaches the use of a CCD camera (col. 32, line 63-col. 33, line 4).

Regarding claim 21, Zarling teaches the use of a micro-titer plate (col. 39, lines 26-27).

Claims 1, 5, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Pollak, U. S. Patent No. 4,954,714. Regarding claim 1, Pollak describes an image producing data method comprising irradiating an image carrier (col. 4, lines 56-62) with a stimulating ray (20, col. 4, lines 59-68), stopping the irradiation and detecting residual fluorescence (col. 6, lines 14-19) using a two dimensional sensor (camera 34, col. 5, lines 15-17).

Regarding claim 5, Pollak teaches the use of a filter for cutting light having a wavelength of the stimulating ray (col. 4, lines 19-21).

Regarding claim 23, Pollack teaches the use of a frequency of 400 Hz (col. 12, lines 55-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zarling as applied to claims 1 and 10 above, and further in view of Kawasaki, U. S. Patent No. 6,040,940. Zarling does not teach the use of a Fresnel lens. However, the use of Fresnel lenses is well known in the art of fluorescence detection (see Kawasaki, col. 1, lines 59-62). Therefore it would have been obvious to one of ordinary skill in the art to use a Fresnel lens in the invention of Zarling to optimize light detection efficiency.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zarling as applied to claims 7 and 19 above, and further in view of Cabib, U. S. Patent No. 5,936,731. Zarling does not teach the use of a cooled CCD camera. However, the use of cooled CCD cameras is well known in the art of fluorescence detection (see Cabib, col. 39, lines 61-64). Therefore it would have been obvious to one of ordinary skill in the art to use a cooled CCD camera in the invention of Zarling to optimize light detection efficiency.

Allowable Subject Matter

Claims 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22 and 24-25 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Claim 13 includes the limitations that an image data producing apparatus comprises a rotatable chopper and a two dimensional sensor to photoelectrically detect residual fluorescence emission. Claim 22 includes the limitation that the stimulating ray emits light to the entire image carrier simultaneously.

Response to Arguments

Applicant's arguments, see page 13, second paragraph, filed February 24, 2004, with respect to the use of a film camera in the device of Pollak have been fully considered and are persuasive. The rejection of claims 2-4 and 10-17 in view of Pollak has been withdrawn.

Applicant's arguments filed February 24, 2004 have been fully considered but they are not persuasive.

In response to applicant's argument in page 13, first paragraph and third paragraph, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a stimulating ray illuminating the specimens simultaneously) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding the applicant's argument in page 13, second paragraph, it is considered that a camera is a two-dimensional sensor.

In response to applicant's argument in page 15, second and third paragraphs, that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the use of a cooled CCD as a method of increasing signal to noise ratio is considered well known in the art of radiation detection. Therefore one of ordinary skill in the art, in possession of an understanding of the Zarling reference, would have considered the use of a cooled CCD system for the advantage of increasing signal to noise ratio.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Moran whose telephone number is 571-272-2443. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

T.M.
TM
March 25, 2004



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